

REMARKS

By way of the amendment instructions above, all independent claims have been revised so as to emphasize that the water-soluble phase-transfer catalyst (PTC) is a quaternary ammonium or phosphonium salt. Support for such amendment may be found throughout the originally filed specification, e.g., at paragraphs [0017] through [0018] as well as original claim 10 (which constitutes its own “disclosure”). Prior pending claim 10 has thus been cancelled as redundant.

Amended versions of claims 1, 3-9 and 12-2 therefore remain pending herein following entry of this amendment. Favorable reconsideration and allowance of such pending claims are requested.

I. Response to 35 USC §103(a) Rejection

The only issue remaining to be resolved in this application is the Examiner's rejection of all pending claims under 35 USC §103(a) as allegedly "obvious" and hence unpatentable from Barker et al (USP 4,426,542) in view of Kwok et al (USP 5,801,292), Starks et al (Phase Transfer Catalysis, 1994, pp 482-488), Halpern et al (Spec. Publ. R.Soc.Chem. 1999, pp 30-39) or Judge et al (UK 1 547 856). Applicants emphatically suggest that all pending claims are patentably distinguishable over such applied references.

At the outset, applicants note that the applicants' prior arguments of record have caused the Examiner to withdraw his earlier rejections. However, the Examiner now persists in his rejection of the claims under 35 USC §103(a) based on a newly cited publication, Kwok et al (USP 5,801,292), in combination with the prior cited Barker et al, Starks et al, Halpern et al and Judge et al. Applicants suggest that the rationale underlying the asserted rejection is somewhat convoluted.

In this regard, the Examiner now acknowledges that Barker et al "...differ from the instant claims in that Barker et al do not conduct an aldol reaction between mixed aldehydes having different numbers of carbon atoms." (Official action at page 4, lines 8-9.) To cure this deficiency, the Examiner apparently now turns to Kwok et al. The significant disclosure in Kwok et al appears at column 2, lines 53 through column 3, line 4 and at column 3, line 58 through column 4, lines 11 where it is disclosed that mixed aldehydes may be employed. Specifically, according to Kwok et al, one of the aldehydes may have from two to thirteen carbon atoms (i.e., R_1 in the formula $R_1\text{CHO}$ may be an alkyl having one to twelve carbon atoms), while a second aldehyde may have one to thirteen carbon atoms (i.e., R_2 in the formula $R_2\text{CHO}$ may be H or an alkyl having one to twelve carbon atoms).

The Examiner then concludes that the mixed aldehydes would "obviously" be employed in the Barker et al process. The other secondary references are apparently being applied for the same reasons as in the prior Action.

The Examiner's analysis is however suggested to be classic hindsight reasoning.¹ Specifically, the Examiner overlooks apparently the admonition in Kwok et al that it is critical that hydrated MgO be employed as the catalyst. ("A critical aspect of the invention is the use of hydrated MgO for catalyzing or promoting the condensation reaction." Col. 4, lines 58-59 of Kwok et al). Thus even though Kwok et al arguably teaches that it is known to have mixed aldehydes in a catalyzed cross-adol reaction, the art is taught that a specific catalyst – namely, hydrated MgO – must critically be employed. Moreover, Kwok et al appear to note that MgO is **not** highly water soluble as it may be removed from the reaction zone by centrifuging. (Column 6, lines 38-40.)

¹ The Federal Circuit regards hindsight as an insidious and powerful phenomenon and is a tempting, but forbidden zone in the inquiry of addressing the statutory obviousness standard. See, e.g., *Panduit Corp. v. Dennison Mfg. Co.*, 227 USPQ 337 (Fed. Cir. 1985) and *Loctite Corp. v. Ultraseal Ltd.*, 228 USPQ 90, 98 (Fed. Cir. 1985).

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Therefore, the ordinarily skilled person having knowledge of Kwok et al would be lead directly away from using mixed aldehydes in a cross-adol reaction in which a water soluble **quaternary ammonium or phosphonium salt** was employed as the **water soluble** phase transfer catalyst as defined in the applicants' presently pending claims.

Thus, since the other secondary references of record fail to cure such deficiencies for the reasons already noted in the record (which reasons are expressly incorporated hereinto by reference), withdrawal of the rejection advanced under 35 USC §103(a) and early issuance of the allowance notice are solicited.

II. Fee Authorization

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

III. Conclusion

Early receipt of the official allowance notice is awaited.

Respectfully submitted,

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